



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/991,539      | 11/21/2001  | Arkady Pittel        | 11627-007001        | 3057             |

26161 7590 10/20/2006

FISH & RICHARDSON PC  
P.O. BOX 1022  
MINNEAPOLIS, MN 55440-1022

EXAMINER

MARIAM, DANIEL G

ART UNIT PAPER NUMBER

2624

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/991,539

Applicant(s)

PITTEL, ARKADY

Examiner

DANIEL G. MARIAM

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,5-26 and 42-52 is/are pending in the application.
- 4a) Of the above claim(s) 43-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-26 and 42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 43-52 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

***Response to Amendment***

1. In response to the Office Action mailed on May 24, 2006 applicant has submitted an amendment filed on August 2, 2006 amending claims 1, 710, 12-18, 20-21, 24, and 26; canceling claims 3-4 and 27-41; adding new claims 42-52.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1-2 and 5-26 have been considered but are moot in view of the new ground(s) of rejection.

***Election/Restrictions***

3. Newly submitted claims 43-52 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the features cited in newly presented claims 43-52 are directed to the non-elected claims (See Group II of the restriction presented in the previous Office Action, in which applicant has elected invention I without traverse).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims (27-41 (which are now cancelled) and 43-52) are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2624

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang (6,038,333).

With regard to claim 1, Wang discloses a portable electronic device (See item 20, in Fig. 2) comprising a digital camera (item 23, in Fig. 3), and a processor configured to derive handwriting or control information from light received by the digital camera from a writing instrument (item 21, in Fig. 2) separate from the apparatus (col. 8, lines 6-32).

With regard to claim 42, in a portable electronic device comprising a digital camera and a processor, receiving images at the digital camera comprising light from a writing instrument separate from the device (the argument (presented above for claim 1, which is an apparatus claim and since an apparatus is defined by its functionality) is not repeated herein but is incorporated by reference), and deriving handwriting and control information from the image (See Figs 1-4; and col.8, lines 6-32).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 6-7, 18, 26 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki, et al (US Patent Application Publication: 2003/0122804) in view of Wang (6,038,333).

With regard to claim 1, Yamazaki, et al discloses an apparatus comprising a portable electronic device, i.e. mobile telephone, a digital camera, i.e., CCD camera, associated with the portable electronic device, and a processor configured to derive handwriting, i.e., signature and/or handwriting, or control information from light received by the digital camera from a writing instrument i.e., writing tool “item 2, in Fig. 1 (See for example, pp. 4-5, paragraphs 0118-paragraph 0131; and Figs. 1-5) (separate from the apparatus). Yamazaki, et al does not expressly call for the writing instrument being separate from the apparatus. However, Wang ((Item 21, in Fig. 2) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by Wang into the system of Yamazaki, et al if for no other reason than to have a writing tool that is detachable from the mobile device, and to do would at least improve Yamazaki’s system by also accepting input from a writing tool that is not fixed to the mobile system.

With regard to claim 6, the apparatus of claim 1 also including a lens arranged to alter the focal length and/or depth of field of the digital camera (See for example, page 4, paragraphs 0113-0114).

With regard to claim 7, the apparatus of claim 1 also including a mechanism configured to enable the portable electronic device to be attached to a writing surface (See for example, Fig. 4).

With regard to claim 18, the apparatus of claim 1 in which the portable electronic device also comprises a display and in which the processor is configured to cause the display to show the trajectory of the writing instrument in real-time (See for example, Fig. 20).

Art Unit: 2624

With regard to claim 26, the apparatus of claim 1 in which the processor is configured to apply pattern recognition to signals from the digital camera (See for example, items 59 and 61, in Fig. 5).

8. Claims 2, 10-11, 14, 19-21, and 23-24 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki, et al in view of Wang as applied to claims 1, 6-7, 18, 26 and 42 above, and further in view of Whitham (6,526,351).

With regard to claim 2, Yamazaki (as modified by Wang) discloses all of the claimed subject matter as already discussed above for claim 1, and incorporated herein by reference. Yamazaki (as modified by Wang) does not expressly call for the portable electronic device comprising a mobile telephone or a personal digital assistant. However, Whitham (See for example, item 40, in Fig. 4) teaches this feature. Therefore, it would have been obvious to employ the teaching as taught by Whitham into the system of Yamazaki (as modified by Wang) so as to have a portable device, such as a mobile telephone or pda, that can be held by hand.

With regard to claim 10, the apparatus of claim 7 in which the portable electronic device includes a writing surface (See item 402, in Fig. 4 of Whitham).

With regard to claim 11, the apparatus of claim 10 in which the writing surface is on a protective cover (item 581, in Fig. 5B of Whitham).

With regard to claim 14, the apparatus of claim 1 in which the processor is configured to derive the location and trajectory of the writing instrument (this feature is considered inherent because the handwritten data is constructed using the location and trajectory of the writing instrument as described above for claim 1).

Art Unit: 2624

With regard to claim 19, the apparatus of claim 18 in which the display is not touch-sensitive (See item 401, in Fig. 4 of Whitham).

With regard to claim 20, as best understood, Whitham discloses the apparatus of claim 1 in which the processor comprises a digital signal processing chip and a general-purpose microprocessor and the software is run in part on the chip and in part on the microprocessor (See for example, Figure 1 of Whitham).

With regard to claim 21, the apparatus of claim 1 in which the portable electronic device also comprises a wireless communication facility and in which the processor is configured to communicate the handwriting or control information to a remote location (See for example, col. 13, lines 40-44 of Whitham).

With regard to claim 23, the apparatus of claim 1 in which the digital camera comprises a still camera (See for example, col. 1, line 24 of Whitham).

With regard to claim 24, the apparatus of claim 1 in which the digital camera comprises a video camera (See for example, col. 1, line 24 of Whitham).

9. Claims 5,12,15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki in view of Wang and Whitham as applied to claims 2, 10-11, 14, 19-21, and 23-24 above, and further in view of Ogawa (6,567,078).

With regard to claim 5, Yamazaki (as modified by Wang and Whitham) discloses all of the claimed subject matter as already addressed above in paragraph 8, and incorporated herein by reference. Yamazaki (as modified by Wang and Whitham) does not expressly call for an infrared filter arranged to filter light being received from the writing instrument. However, Ogawa (col. 10, lines 5-20) teaches this feature. Therefore, it would have been obvious to one

Art Unit: 2624

having ordinary skill in the art to employ the teaching as taught by Ogawa into the system of Yamazaki (as modified by Wang and Whitham) if for no other reason than to filter out the infrared light.

With regard to claim 12, the apparatus of claim 1 in which the processor is configured to define a mapping between a sensor surface in the digital camera and a space in which the writing instrument is located (See for example, col.3, lines 6-27 of Ogawa).

With regard to claim 15, the apparatus of claim 1 in which the processor is configured to generate the handwriting and control information based on processing cycles each associated with one location of the writing instrument (See for example, Figs 4-5 of Ogawa).

With regard to claim 25, the apparatus of claim 1 also including an infrared beacon configured to be directed at the writing instrument (See col. 10, lines 5-20 of Ogawa).

10. Claims 8, 9, 13, 16-17, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki, et al in view of Wang as applied to claims 1, 6-7, 18, 26 and 42 above, and further in view of Sekendur (US Patent Application Publication: 2002/0118181).

With regard to claim 9, Yamazaki, et al (as modified by Wang) discloses all of the claimed subject matter as set forth above in paragraph 7, and incorporated herein by reference. Yamazaki, et al (as modified by Wang) does not expressly call for comprising a clip configured to grasp paper. However, Sekendur (See for example, Fig. 1) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by Sekendur into the system of Yamazaki, et al (as modified by Wang) so that a clip board can be integrated in the portable apparatus (item 20 of Wang) for mounting a paper document.



Art Unit: 2624

With regard to claim 8, the apparatus of claim 7 in which the mechanism comprises a mechanism comprises a suction device configured for attachment to a white board (which reads on Figs. 1-6 of Sekendur).

With regard to claim 13, the apparatus of claim 1 in which the processor is configured to define the mapping in response to calibration steps that includes a user marking three locations in the space in which the writing instrument is located (See for example, page 5, paragraph 0082, lines 9-15 of Sekendur).

With regard to claim 16, the apparatus of claim 1 in which the processor is configured to discriminate light received from the writing instrument from other light by locking onto a carrier frequency at which light from writing instrument is modulated (broadly reads on page 4, paragraph 0078 of Sekendur).

With regard to claim 17, the apparatus of claim 1 in which the processor is configured to determine a tilt of the writing instrument relative to a direction normal to a writing surface (See page 3, paragraph 0068; and page 4, paragraph 0079 of Sekendur).

With regard to claim 22, the apparatus of claim 1 in which the digital camera is configured to receive light that has been reflected from the writing instrument (which reads on page 4, paragraph 78 of Sekendur)

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G. MARIAM whose telephone number is 571-272-7394. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW BELLA can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 09/991,539  
Art Unit: 2624

Page 10



DANIEL G MARIAM  
Primary Examiner  
Art Unit 2624

October 16, 2006